



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,479	09/13/2001	Siegfried Schweidler	PD990014	6074

7590 01/17/2008
Joseph S Tripoli
Thomson Multimedia Licensing
PO Box 5312
Princeton, NJ 08540

EXAMINER

LI, ZHUO H

ART UNIT	PAPER NUMBER
----------	--------------

2185

MAIL DATE	DELIVERY MODE
-----------	---------------

01/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/936,479

Applicant(s)

SCHWEIDLER ET AL.

Examiner

Zhuo H. Li

Art Unit

2185

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

2. Claim 1 objected to because of the following informalities: line 6, "the plurality" should be -- the plurality of data words -- in order unified the claimed limitations. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made

in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo et al. (US PAT. 6,324,178 hereinafter Lo) in view of Gillard et al. (US PAT. 5,404,166).

Regarding claim 1, Lo discloses a method for the management of data received via a serial data bus (240 or 250, figure 2A) in a receiving device (220, figure 2A and col. 4 line 47 through col. 5 line 14) comprising the steps of receiving data transmitted in bus packets having a variable length (col. 5 lines 24-35, data packets of a first communication domain are different from data packets of a second communication domain such that data packets received in the receiving device are obviously in variable length), each bus packet having a header (322, figure 3A) and a payload data field (324, figure 3A), the payload data field being divided into a number of data blocks having a defined length (data blocks and each data block has 32 bits, figure 8A), a combination of a defined number n of data blocks forming a data source packet of fixed length (col. 8 line 6 through col. 9 line 9, i.e., assembly a new data packet by a combination of a defined number n of block), section-by-section transmission of the data source packet within the framework of data blocks being permitted (col. 9 lines 10-40, i.e., accessing data payload field and broadcasting data until termination). Lo differs from the claimed invention in not specifically teaching each data block within the payload data field consisting of a plurality of data words being a fixed amount and carrying out a modulo-n counting of the data blocks in order to determine the data source packet boundaries, and in that the beginning of a new data source packet is signaled to a memory management device at the beginning of the next counting interval. However, Gillard teaches

subsequent storage of data or error correction encoding generally operating on fixed length data word (col. 1, lines 23-25) such that one skill in the art would recognize each data block within the payload data field as shown on Lo consisting of a plurality of data words being a fixed amount as taught by Gillard. In addition, Gillard teaches carrying out a modulo-n counting of the data blocks in order to determine the data source packet boundaries, and in that the beginning of a new data source packet is signaled to a memory management device at the beginning of the next counting interval, i.e., format accumulator (120) generates a 5-bit output signal representing a modulo-32 count of the code length received during the formatting of a current data block, count accumulator (125) maintains a count of the cumulative lengths of payload data field related to the video data stream, these counts are then summed to generate a total count, when the total count reaches the available length of the video data section, and end of block signal is generated by the count accumulator, a boundary accumulator (126, figure 3) incorporate with pointer, count accumulator and header with starting address indicative of the position of the video data, to determining the end of each variable length video data stream in a fixed length blocks (col. 4 line 34 through col. 5 line 35), thereby providing data format conversion in a way that keep pace with the overall data rate. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Lo in having each data block within the payload data field consisting of a plurality of data words being a fixed amount and carrying out a modulo-n counting of the data blocks in order to determine the data source packet boundaries, and in that the beginning of a new data source packet is signaled to a memory management device at the beginning of the next counting interval, as per teaching of Gillard, in order to provide data format conversion in a way that keep pace with the overall data rate.

Regarding claim 5, the limitations of the claim are rejected as the same reasons set forth in claim 1.

Regarding claim 8, Gillard discloses the counter, i.e., count accumulator (125) by which data are counted in particular in units of bytes and which outputs a data block counting signal if the number of data that have been countered are as many as defined as belonging a data block (col. 4 line 34 through col. 5 line 35).

Regarding claim 9, Lo teaches IEEE 1394 serial bus communication standard becoming a popular standard adopted by manufacturers of computer systems and peripheral components for its high speed and interconnection flexibilities (col. 1 lines 31-35).

6. Claims 2-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo et al. (US PAT. 6,324,178 hereinafter Lo) in view of Gillard et al. (US PAT. 5,404,166) as applied in claims above, and further in view of Boyer et al. (US PAT. 5,410,546 hereinafter Boyer).

Regarding claims 2-3, the combination of Lo and Gillard differs from the claimed invention in not specifically teaches each bus packet being subject to CRC checking and the checking results being buffer-stored in order to be able to ascertain whether a data source packet transmitted in two or more bus packets has been transmitted without transmission errors, wherein a reference count reading is transmitted in each bus packet in order to check the completeness of the transmitted data, and in which comparison counting of the received data block is effected and, when the data block associated with the reference counter reading is received, the result of the comparison counting is compared with the reference counter reading and an error signal is output in the event of non-correspondence. However, Boyer discloses a data transferring device (figure 1) comprising a

blocking/compression unit (105) compresses the data and transmits the data over bus (108) in packets to both Page CRC generator (101) for CRC generation and to page buffer memory (102) for temporary storage, and CRC checker (104) computes a CRC code for the entire page buffer as each byte is transmitted over bus (110) to block storage device (107), and may invoke appropriate error recovery procedures when it detects a compare error from CRC checker (col. 7 line 11 through col. 8 line 63). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Lo and Gillard in having each bus packet being subject to CRC checking and the checking results being buffer-stored in order to be able to ascertain whether a data source packet transmitted in two or more bus packets has been transmitted without transmission errors, wherein a reference count reading is transmitted in each bus packet in order to check the completeness of the transmitted data, and in which comparison counting of the received data block is effected and, when the data block associated with the reference counter reading is received, the result of the comparison counting is compared with the reference counter reading and an error signal is output in the event of non-correspondence, as per teaching by the data transfer device of Boyer, because it assures the integrity of the data at all times between receipt from the compression unit and transmission to the storage device, and permits these CRC computations and combinations to proceed as the data is received without loss of performance at the high data rates common in current high density tape storage subsystem (col. 5 lines 28-34).

Regarding claims 6-7, the limitations of the claims are rejected as the same reasons set forth in claims 2-3.

Response to Arguments

7. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhuo H. Li whose telephone number is 571-272-4183. The examiner can normally be reached on Mon - Fri 10:00am - 6:30pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sanjiv Shah can be reached on 571-272-4098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhuo H. Li 

Patent Examiner
January 8, 2008